

THAT WHICH IS CLAIMED IS:

1. A method of producing a pasteurized shell egg, comprising:

heating the shell egg in an aqueous solution of a predetermined temperature; and

5 maintaining the shell egg in the aqueous solution for a predetermined time;

wherein said predetermined time and said predetermined temperature provide to the albumen of the shell egg a total thermal treatment described by an  
10 equivalent time and an equivalent temperature which define a point above the whites 9D salmonella line of Figure 1 but insufficient to cause coagulation of the albumen or the yolk of the shell egg.

15 2. The method of claim 1 further comprising the step removing said shell egg from said aqueous solution after said holding step.

3. The method of claim 2 further comprising the step of cooling the shell egg after said removing step.

20 4. The method of claim 3, wherein said cooling step is carried out at room temperature.

5. The method of claim 1 wherein said predetermined temperature is between about 56 degrees celsius and about 60 degrees celsius.

25 6. The method of claim 1 wherein the shell egg is agitated in the aqueous solution.

7. The method of claim 1 further comprising the step of circulating the aqueous solution about the shell egg.

8. The method of claim 1 wherein said equivalent time and said equivalent temperature define a point above the yolk 9D salmonella line of Figure 3.

5 9. The method of Claim 1 wherein said equivalent time and said equivalent temperature also define a point below the expected salmonella destruction line of Figure 1.

10 10. The method of Claim 8 wherein said equivalent time and said equivalent temperature also define a point below the expected salmonella destruction line of Figure 1.

11. A method of producing a pasteurized shell egg comprising:  
heating the shell egg in an aqueous solution  
15 of a predetermined temperature;  
maintaining the shell in the aqueous solution for a predetermined time;  
wherein said predetermined time and said predetermined temperature provide to the albumen of the  
20 shell egg a thermal treatment sufficient to cause a 9D reduction in *Salmonella enteritidis* but insufficient to cause coagulation of the albumen or the yolk of the shell egg.

25 12. The method of claim 11 further comprising the step of removing said shell egg from said aqueous solution after said holding step.

13. The method of claim 11 wherein said predetermined temperature is between about 56 degrees celsius and about 60 degrees celsius.

30 14. The method of claim 11 wherein the shell egg is agitated in the aqueous solution.

15. The method of claim 11 further comprising the step of circulating the aqueous solution about the shell egg.

5 16. The method of claim 11 wherein said equivalent time and said equivalent temperature define a point above the yolk 9D salmonella line of Figure 1.

17. A method of producing a pasteurized shell egg comprising:

10 heating the shell egg in an aqueous solution of a predetermined temperature;

maintaining the shell in the aqueous solution for a predetermined time;

15 wherein said predetermined time and said predetermined temperature define a point above the apparent  $F_0$  line of Figure 1 and wherein said predetermined time and said predetermined temperature are insufficient to cause coagulation of the albumen or the yolk of the shell egg.

20 18. The method of Claim 17 wherein said predetermined time and said predetermined temperature also define a point above the yolk 9D salmonella line of Figure 1.

25 19. The method of Claim 18 wherein said predetermined time and said predetermined temperature also define a point below the expected *Salmonella* destruction line of Figure 1.

30 20. A thermally treated shell egg wherein the albumen of said shell egg received a thermal treatment sufficient to cause a 9D reduction in *Salmonella enteritidis* but insufficient to cause coagulation.

5 21. The thermally treated shell egg of Claim 20, wherein the yolk of said shell egg received a thermal treatment sufficient to cause a 9D reduction in *Salmonella enteritidis* but insufficient to cause coagulation.

22. The thermally treated shell egg of Claim 20 wherein said shell egg has an essentially natural proportion of indigenous gases therein.

10 23. A thermally treated shell egg produced by the process of claim 1, claim 11, claim 17, or claim 20.

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